XGPS160

OWNER'S MANUAL

Universal GPS Receiver

Bluetooth®

Made for iPod iPhone iPad

FCC ID: GJW-XGPS160
IC ID: 4038A-XGPS160

Dual®

Introduction

Thank you for purchasing the XGPS160 SkyPro™ Bluetooth® GPS Receiver from Dual Electronics.

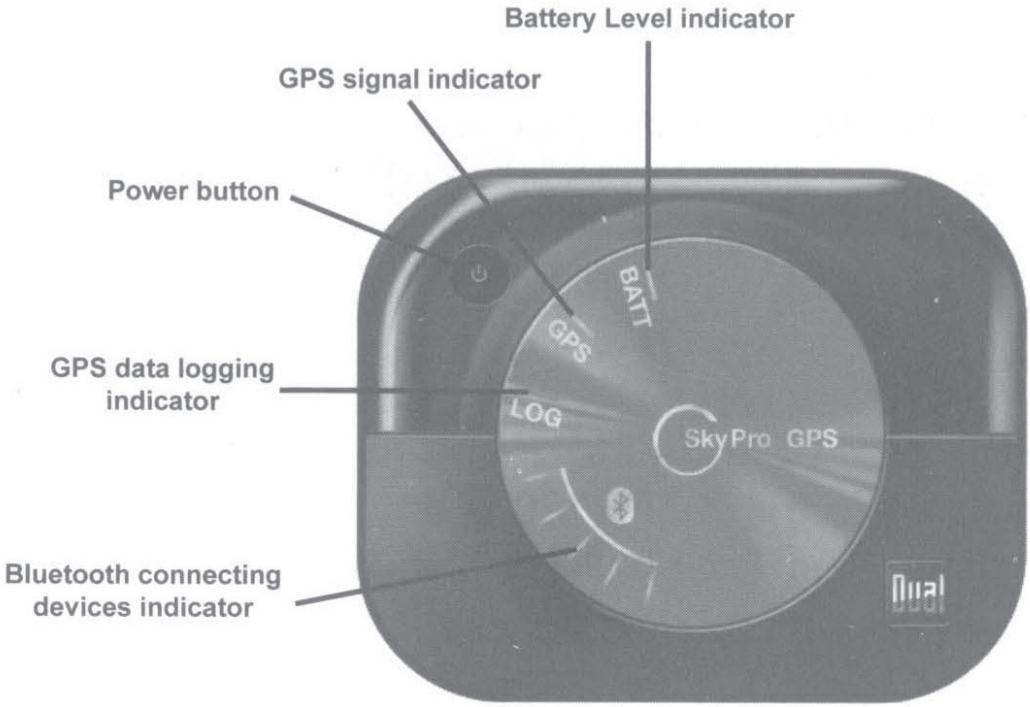
The XGPS160 works with signals from both US and Russian satellite systems to determine your location anywhere in the world. It then can transmit your location information to many kinds of devices which have Bluetooth connectivity and support the Bluetooth Serial Port Profile (SPP). This includes:

- the iPad® (generations 1 through 4)
- the iPad mini (generation 1)
- the iPod touch® (generations 2 through 5)
- the iPhone® (generations 2 through 5)

You can also connect the XGPS160 to many Android®, Windows® or Blackberry® smart phones and tablets, as well as to notebook computers running Windows or OS X.

NOTE: Not all manufacturers include SPP in their devices, even if the device has Bluetooth. Please consult the owner's manual for your specific device to determine whether it supports SPP. Some devices, like Android-based devices, may need a helper app to connect to the XGPS160. See ***Pairing with your device*** for more information.

Features



Power switch. Firmly press and hold the power icon for a moment to turn the device on or off.

Low battery indicator. This light will flash red when the battery level is low and the device requires recharging. (See ***Charging the XGPS160***.) During charging, the light will glow red and change to green when charging is complete. This light is normally off while the XGPS160 is running.

Bluetooth indicator. These lights will indicate whether the XGPS160 is searching for a device to connect to, negotiating a connection with a device, or successfully paired to a device.

Features (cont'd)

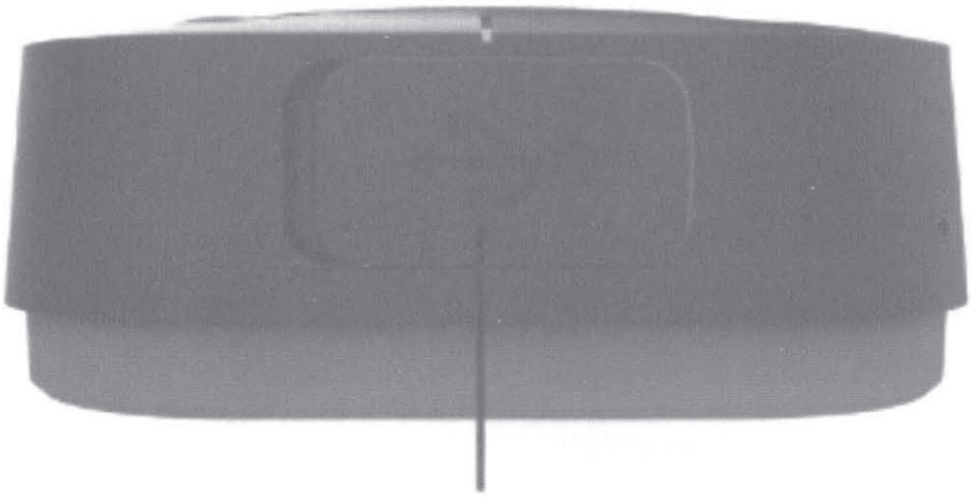
A quick flash happens when the XGPS160 is pairing with another device. A solid glow indicates that the XGPS160 is successfully paired and connected to another device. XGPS160 can connect with up to 5 devices simultaneously. Also these lights indicate the number of devices connecting with XGPS160 concurrently.

GPS status indicator. The GPS indicator will flash while the XGPS160 is searching for satellite signals. The light will change to a steady green when your location is successfully determined.

GPS data logging. The LOG indicator will glow orange while the XGPS160 is actively recording your position. The XGPS160 Status Tool app (available on the iTunes store) can be used to turn this function on and off, as well as export the stored log file information.

USB connection. The USB connector is used for charging the XGPS160.

Features (cont'd)



USB port for charging

Setup

The XGPS160 is very simple to use. There is a one-time setup process to connect it to your iPad, iPod, smart phone, tablet or laptop computer. Once this setup process is completed, simply turn on the XGPS160 to begin using it.

To setup the XGPS160 with your device, you will need to do two things:

- Power on the XGPS160.
- Pair the XGPS160 with the device you will be using.

Pairing with your device

Pairing is the process connecting two devices over Bluetooth and allowing them to communicate. You will need to go through the pairing process each time you use the XGPS160 with a new device, and the XGPS160 will automatically try to reconnect to the last device it was paired with.

NOTE: If your device requires a code to connect during the pairing process, use “0000” or “1234”.

Pairing the XGPS160 with the iPod touch, iPad or iPhone

(NOTE: these instructions were written using iOS version 6.1 and may be different if you are using a different version of the iPhone OS.)

Pairing with your device

• On the iPad/iPod touch/iPhone, go to:

Settings->Bluetooth

and turn on Bluetooth. The iOS device will automatically begin looking for the XGPS160.

• Turn on the XGPS160. The blue Bluetooth status light on the XGPS160 will begin to blink slowly (about once per second).

• After a few seconds, the XGPS160 will appear as **XGPS160-xxxxxx** in the list of devices on the touch/iPad/iPhone screen. (The last 6 digits are part of the XGPS160 serial number and will be different for each unit.) The word **Misc** may also appear for a few moments before **XGPS160-xxxxxx** appears.

• Tap **XGPS160-xxxxxx** in the list of devices to connect to it. The words "Not Paired" will disappear and be replaced by the spinning cursor.

• After approximately 10 seconds, the **XGPS160-xxxxxx** name in the device list will change to blue text and the word **Connected** will appear. The blue LED on the XGPS160 will blink rapidly for a few seconds and then stay illuminated, confirming the two devices have successfully paired and are communicating.

Pairing the XGPS160 with an Android device

(NOTE: these instructions were written using Android OS version 3.2 and may be different if you are using a different version of the Android OS.)

- Turn on the XGPS160. The blue Bluetooth status light on the XGPS160 will begin to blink slowly (about once per second).
- On the Android device go to:

Settings->Applications->Development

and enable the option for **Allow mock locations**. This will let the Android device use GPS information from an external device like the XGPS160.

- On the Android device go to:

Settings->Wireless & networks

and turn on Bluetooth.

- On the Android device go to

Settings->Wireless & networks->
Bluetooth settings

and select **Scan for devices**.

- After a few seconds, the word **XGPS160-xxxxxx** will appear in the list of devices. (Note: the last 6 digits are part of the XGPS160 serial number and will vary from device to device.) At this point, the Android device may say **Paired but not connected** and the blue Bluetooth indicator XGPS160 will continue to blink slowly.

• In order for GPS-enabled apps to use information from an external GPS, you will likely need to install a helper app on your Android device. This helper app runs in the background and will let apps communicate with the XGPS160. Several helper apps are available, and we recommend using a free app on the Google Play store called ***Bluetooth GPS Provider by MOBILE-J.DE.***

Using the Bluetooth GPS helper app with the XGPS160

• Please make sure you have completed the steps above in ***Pairing the XGPS160 with an Android device.***

• Download and install the ***Bluetooth GPS Provider*** app from Android Marketplace.

• Open the ***Bluetooth GPS Provider*** app and select the XGPS160 after pressing "Choose GPS receiver" button in the main window of the app. If you are needed to enable "Mock Locations", please permit it.

• Tap the ***Start*** button. Your Android device will connect to the XGPS160 and begin streaming location data to apps on your device. The blue Bluetooth indicator on the XGPS160 will illuminate without blinking. If you want to see NMEA data, long-press the sat view.

Pairing the XGPS160 with a Blackberry device

(NOTE: these instructions were written using a Blackberry Storm 9550 and may be different if you are using a different model of Blackberry smart phone.)

• Turn on the XGPS160. The blue Bluetooth light on the XGPS160 will begin to blink slowly (about once per second).

• From the Blackberry main menu go to:

Manage Connections

and turn on Bluetooth.

• From the Blackberry main menu go to:

Options->Bluetooth->
Add Device

and select **Search**.

• After a few seconds, the name **XGPS160-xxxxxx** will appear in the list of paired devices. (Note: the last 6 digits are part of the XGPS160 serial number and will vary from device to device.)

• From the Blackberry main menu go to

Options->Advanced Options->
GPS

and select the **XGPS160-xxxxxx** from the **GPS Data Source** list of devices. Also, on the same menu, make sure that **GPS Services** is set for **Location On** and **Location Data** is **Enabled**.

If you need additional help connecting the XGPS160 to your device, please contact customer service (cs@dualav.com or 866-382-5476). However, due to the enormous number and variety of available devices, you may need to contact the manufacturer of your device for additional instructions.

Using the XGPS160

Once the XGPS160 is paired with your device, you can begin using apps that utilize GPS information.

The XGPS160 includes a non-slip pad for use in an aircraft, in a car or on a boat. Slide the XGPS160 into the pad to secure it, making sure that the lip of the pad seals over the top edges of the XGPS160. The XGPS160 is not waterproof, but it will withstand light splashing when it is seated properly in the non-slip pad.

Charging the XGPS160

The XGPS160 is charged via the USB connector on the side of the device. To charge, simply connect the XGPS160 to the USB port on any computer using the included USB cable. A 12V cigarette lighter adapter is also included for charging the XGPS160 in a car. It takes approximately 2.5 hours to fully charge the XGPS160.

Tips for best performance

• Put the XGPS160 in a location with a clear view of the sky: on the glareshield in the cockput, on the dashboard of your car, on a boat bulkhead, a mesh pocket in a backpack, etc.

• The range of the Bluetooth connection will drop as the battery level drops. If you find that the wireless connection is failing, try recharging the XGPS160.

Specifications

Dimensions (WxHxD in mm)

- XGPS160: 55.0 x 70.0 x 22.0
- Non-slip pad: 107.0 x 122.0 x 25.0

XGPS160 Voltage

- Input voltage: 5 VDC

Cigarette Lighter Power Adapter Voltage

- Input voltage: 12-30 VDC
- Output: 5 VDC

GPS/GLONASS

- GPS and GLONSS supported simultaneously
- SBAS (WASS, MSAS, EGNOS, GAGAN) supported.
- GPS: L1 1575.42 MHz
- GLONASS: L1 1598.0625 MHz ~ 1605.375 MHz
- Cold Start: <29 sec. Typical (open sky)
- Warm Start: <25 sec. Typical (open sky)

Bluetooth

- CSR engine
- Version: 2.1+EDR
- Range: ~10m (~33 ft.) (open space)

Internal Battery

- Capacity: 1400 mAh
- Operating time: ~10 hours (for 1 device)
- Charging time: ~3 hours

Specifications

Environmental Requirements

- Operating temp: 14˚F - 140˚F (-10˚C - 60˚C)
- Storage temp: -4˚F - 176˚F (-20˚C - 80˚C)
- Relative humidity: 5% - 95% non condensing

ICC Compliance

This Class [B] digital apparatus complies with Canadian ICES-003.

This radio transmitter (4038A-XGPS160) has been approved by Industry Canada to operate with the antenna styles listed below with the maximum permissible antenna gain and required antenna impedence for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

IC Warning: this device complies with Industry Canada-license exempt RSS standard(s). Operation is subject to the following two conditions:

1) this device may not cause interference, and

2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le presént appareil est conforme aux CNR

Compliance

d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

1) l'appareil ne doit pas produire de brouillage, et

2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'encompromettre le fonctionnement.

FCC Compliance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential

Compliance (cont'd)

installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Limited One-Year Warranty

This warranty gives you specific legal rights. You may also have other rights which vary from state to state. Dual Electronics Corp. warrants this product to the original purchaser to be free from defects in material and workmanship for a period of one year from the date of the original purchase.

Dual Electronics Corp. agrees, at our option, during the warranty period, to repair any defect in material or workmanship or to furnish an equal new, renewed or comparable product (whichever is deemed necessary) in exchange without charges, subject to verification of the defect or malfunction and proof of the date of purchase. Subsequent replacement products are warranted for the balance of the original warranty period.

Who is covered? This warranty is extended to the original retail purchaser for products purchased from an authorized Dual dealer and used in the U.S.A.

What is covered? This warranty covers all defects in material and workmanship in this product. The following are not covered: software, installation/removal costs, damage resulting from accident, misuse, abuse, neglect, product modification, improper installation, incorrect line voltage, unauthorized repair or failure to follow instructions supplied with

Warranty (cont'd)

the product, or damage occurring during return shipment of the product. Specific license conditions and copyright notices for the software can be found via http://www.dualav.com.

What to do?

1. Before you call for service, check the troubleshooting guide in your owner's manual. A slight adjustment of any custom controls may save you a service call.

2. If you require service during the warranty period, you must carefully pack the product (preferably in the original package) and ship it by prepaid transportation with a copy of the original receipt from the retailer to an authorized service center.

3. Please describe your problem in writing and include your name, a return UPS shipping address (P.O. Box not acceptable), and a daytime phone number with your shipment.

4. For more information and for the location of the nearest authorized service center please contact us by one of the following methods:

- Call us toll-free at 1-866-382-5476
- E-mail us at cs@dualav.com

Exclusion of Certain Damages: This warranty is exclusive and in lieu of any and all other warran-

Warranty (cont'd)

ties, expressed or implied, including without limitation the implied warranties of merchantability and fitness for a particular purpose and any obligation, liability, right, claim or remedy in contract or tort, whether or not arising from the company's negligence, actual or imputed. No person or representative is authorized to assume for the company any other liability in connection with the sale of this product. In no event shall the company be liable for indirect, incidental or consequential damages.

Dual Electronics Corp.
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www.dualav.com
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